



Re: piece on TRI and fracking
Jacqueline Morrison to: Angela McFadden
Cc: Abe Ferdas, Wayne Naylor, Harry Daw

12/07/2011 09:59 AM

From: Jacqueline Morrison/R3/USEPA/US
To: Angela McFadden/R3/USEPA/US@EPA
Cc: Abe Ferdas/R3/USEPA/US@EPA, Wayne Naylor/R3/USEPA/US@EPA, Harry Daw/R3/USEPA/US@EPA

Thanks Angela!

Jacqueline Morrison
Land and Chemicals Division
Immediate Office of the Director
EPA Region 3
(215) 814-5664

Angela McFadden

FYI - copied from forwarded email below: ----- Original Message -----

12/07/2011 08:39:58 AM

From: Angela McFadden/R3/USEPA/US
To: William Reilly/R3/USEPA/US@EPA
Cc: Jacqueline Morrison/R3/USEPA/US@EPA
Date: 12/07/2011 08:39 AM
Subject: piece on TRI and fracking

FYI - copied from forwarded email below:

----- Original Message -----

From: Ex. 6 - Personal Privacy
To: Sent: Wednesday, December 07, 2011 1:55 AM
Subject: Learn about toxic chemicals used in hydraulic fracturing

<http://toxmap.nlm.nih.gov/toxmap/news/2011/11/learn-about-toxic-chemicals-used-in-hydraulic-fracturing.html>

Learn about toxic chemicals used in hydraulic fracturing

By TOXMAP Admin on November 30, 2011 7:28 PM
November 30, 2011

Hydraulic fracturing (also called hydrofracking or fracking) is a process in which millions of gallons of water, sand and chemicals are pumped underground to break apart rock in order to release oil and natural gas.

The US EPA [Toxics Release Inventory](#) (TRI) program requires [facilities in certain industries](#) that manufacture, process, or use significant amounts of toxic chemicals, to report annually on their releases of these chemicals. Hydraulic fracturing is currently **not** a TRI-covered industry and so is not represented in TOXMAP.

EPA scientists are conducting a [study of hydraulic fracturing](#) to better understand any potential impacts on drinking water and groundwater. Congress has released a [report on hydraulic fracturing](#) (PDF, 156 KB) that lists 29 toxic chemicals used in fracturing (see Table 3 of this report). Click on the links in the table below for additional information on these chemicals:

Acetaldehyde	Acetophenone	Acrylamide
Benzene	Benzyl chloride	Copper
Cumene	Di (2-ethylhexyl) phthalate	Diesel
Diethanolamine	Dimethyl formamide	Ethylbenzene
Ethylene glycol	Ethylene oxide	Formaldehyde
Hydrochloric acid	Hydrofluoric acid	Lead
Methanol	Naphthalene	Nitrilotriacetic acid
p-Xylene	Phenol	Phthalic anhydride
Propylene oxide	Sulfuric acid	Thiourea
Toluene	Xylene	

Angela McFadden

U.S. EPA, Region 3
Water Protection Division
1650 Arch Street (3WP00)
Philadelphia, PA 19103-2029

Tel. (215) 814-2324
cell (215) 287-7823
Fax (215) 814-2301

----- Forwarded by Angela McFadden/R3/USEPA/US on 12/07/2011 08:38 AM -----

From:
To:

Ex. 6 - Personal Privacy

William Richardson/R3/USEPA/US@EPA

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Ex. 6 - Personal Privacy

>, Mark Nelson/R3/USEPA/US@EPA,

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Reynolds/R3/USEPA/US@EPA

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>, Larry Merrill/R3/USEPA/US@EPA,

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McFadden/R3/USEPA/US@EPA

Angela

Date:
Subject:

12/07/2011 04:10 AM

Fw: DAILY UPDATE 7 December 2011. News of interest to Mon river watershed denizens.

Don Strimbeck, Sec/Treas
Upper Mon River Assoc
UpperMon.org
MonRiverSummit.org

Ex. 6 - Personal Privacy

DIM0065040

DIM0065042

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----- Original Message -----

From: Donald C. Strimbeck

Ex. 6 - Personal Privacy

Sent: Wednesday, December 07, 2011 4:06 AM

Subject: DAILY UPDATE 7 December 2011. News of interest to Mon river watershed denizens.

DUNKARD CREEK-7DecY2K11

STATEHOUSE BEAT, Phil Kabler, Charleston Gazette, Sunday 4 December 2011

If Gov. **Earl Ray Tomblin** calls a special session on Marcellus Shale drilling regulation next week (which looks increasingly likely), it will be not because there's consensus on the bill, but because he believes he has enough votes in the House to pass a version of the bill favored by industry.

One of Tomblin's issues with the draft bill that came out of the House-Senate select committee is that it would put specific standards for such things as well casings directly into state law, rather than going through the normal rule-making process.

Generally speaking, Tomblin's concern is well taken, since its comparatively easy to amend agency rules to adapt to changes in

technology and other requirements.

However, those who've insisted on putting the technical regulations into the legislation, including Delegate **Tim Manchin**, D-Marion, know that the legislative rule-making review process also favors industry, who are able to overwhelm environmentalists and landowners with the sheer numbers of lobbyists and technical advisors that they can devote to the rule-making process.

Some legislators have expressed concerns about the potential embarrassment of coming out of a special session with no legislation -- given the short window of opportunity to act prior to the Christmas holiday week.

Charleston Gazette OP-ED Wednesday 7 December 2011:

December 6, 2011

Dave Efaw: Drillers should be hiring locals

CHARLESTON, W.Va. -- There is currently quite a discrepancy in Wetzel County. Last month, Wetzel was again ranked as having the highest unemployment rate in the state, but it also has the highest rate of natural gas drilling activity in the region. How can a county that's booming with Marcellus Shale natural gas development still have record high unemployment?

Delegate Tim Manchin, D-Marion, knows the answer. "Wetzel County has the state's highest unemployment rate, while the hotels are inundated with out-of-state workers," Manchin told a meeting of the U.S. Senate Energy and Natural Resources Committee in Charleston.

Wetzel citizens are watching the natural gas industry flourish in their own backyard, while RVs and trucks with license plates from Texas, Louisiana and other far-flung states roll in to do jobs local workers should be doing.

In a region that has both high unemployment as well as a trained, professional work force of men and women ready and anxious to work, there is absolutely no reason to import large numbers of out-of-state workers.

Dominion and other energy companies are big on publicizing their commitment to local communities and spreading a lot of token donations around to local organizations. However, big public-relations campaigns and a few donations aren't going to help Wetzel County's biggest problem: unemployment.

If the energy companies are truly committed to contributing to our local communities, whose natural resources mean billions to their bottom line, they need to hire locally.

Local workers mean that paychecks stay in their communities and in turn help everyone in the local economy flourish. Without

investing in local workers, the only ones who will flourish from Marcellus Shale are Big Energy and their investors. We're not ready to sit back and watch Big Energy make billions at the expense of local communities that are already struggling.

We want Marcellus Shale and the natural gas industry that can be built upon it to benefit both the natural gas companies and local communities. This goal is now being addressed by a document called "The Marcellus Principles," a commonsense set of guidelines that will help ensure local residents benefit from the natural resources in their own backyards.

We are asking local workers, community members, elected officials and corporations to all sign on to the Marcellus Principles for the good of all involved in the booming Marcellus Shale gas industry.

The Marcellus Principles assert that West Virginia's most important natural resource is its people. If the natural gas industry wants to build and develop here, it needs to hire local workers so the communities and companies can share a prosperous future together.

Efaw is secretary-treasurer of the West Virginia State Building and Construction Trades Council.

THE STATE JOURNAL:

Most Voters Believe Natural Gas Development Will be Positive

Posted: Dec 06, 2011 10:46 AM EST Updated: Dec 06, 2011 10:51 AM EST

By Ann Ali, Political Reporter

A strong majority of West Virginia voters believe in the power of natural gas, according to a new poll from Mark Blankenship Enterprises.

Out of 400 registered voters polled by cell phone and land line between Nov. 30 and Dec. 1, 80 percent said they think development of natural gas in West Virginia will have a positive impact on the state. Nearly half of those, 49 percent, indicated the development will be "very positive."

A total of 12 percent of those polled said the development of natural gas in the state would have a negative impact, and 9 percent said they didn't know.

"Voters are very optimistic about the development of natural gas in the state," Mark Blankenship, owner of MBE, said about the poll results. "It is an issue they are paying close attention to and clearly hoping will lead to economic and employment gains."

Blankenship said the questions about the oil and natural gas industry were added to the latest poll "because oil and natural gas in West Virginia is the flavor of the day."

A slight majority of voters polled, 52 percent, said they think higher federal taxes on natural gas and oil companies would hurt job creation in West Virginia.

Blankenship said he knows West Virginians' biggest concerns are always job creation and the economy, so he asked about taxes to get at the issue in another way.

"I think that's very important as you go along in this debate," Blankenship said. "This isn't support or opposition ... if they agree that higher taxes on the industry will hurt job creation, it's basic logic."

Blankenship said he has conducted a lot of focus groups about oil and natural gas throughout West Virginia, and he said it seems like residents are aware of the issues, mostly from their local media coverage.

"With the oil and natural gas industry being a prominent topic of discussion, West Virginia voters are fairly adamant they believe higher taxes on the industry would hurt job creation, and that sentiment persists across West Virginia's geographic regions," Blankenship said.

Not much support for statewide officials in public poll

Posted: Dec 06, 2011 2:32 PM EST Updated: Dec 06, 2011 2:48 PM EST

By Ann Ali, Political Reporter

CHARLESTON -

The newest voter opinion poll from Mark Blankenship Enterprises shows a lot of room for growth in support among statewide officials.

Secretary of State Natalie Tennant and Gov. Earl Ray Tomblin garnered more support than other officials, according to the poll numbers.

Fewer than half of those polled, 46 percent, said they think Tomblin deserves to be re-elected, and 39 percent said they think someone new deserves a chance, but nearly 23 percent are unsure.

When the numbers were separated by party affiliation, 19 percent of Democrats said it's time to give someone new a chance, and 50 percent of independents said Tomblin deserves to be re-elected. Opinions among Republicans were more evenly split with 37 percent of GOP voters saying Tomblin deserves to be re-elected and 41 percent saying it's time to give someone new a chance.

Tomblin was elected governor Oct. 4 by a margin of 49 percent to 47 percent in a special election after he spent nearly a year serving as acting governor. He must run again in November 2012.

Nearly half of voters polled, 49 percent, said they think Tennant deserved to be re-elected, and 28 percent said it's time to give someone new a chance at the seat, while 28 percent of those polled said they were unsure.

"Tennant receives more support than other statewide officials tested," Mark Blankenship said. "Even she is just shy of receiving a majority of voters who believe she deserves re-election, and this all could point to some real issues for incumbents next year."

Blankenship said Sen. Joe Manchin, D-W.Va., is enjoying a 70 percent re-election support, while President Barack Obama's re-election number is only 28 percent, which indicates that voters are really evaluating their incumbents.

A total of 46 percent of voters polled said it's time to give someone new a chance at being West Virginia Attorney General. Attorney General Darrell McGraw was first elected in 1992.

Voters are even more divided as to whether Treasurer John Perdue should be re-elected, with 34 percent of those polled saying it's time to give someone new a chance and 31 percent saying Perdue deserves to be re-elected. Perdue was first elected to statewide office in 1996. He has been the subject of a federal investigation that involves donations to his unsuccessful gubernatorial campaign this year as well as a real estate transaction.

And 30 percent of voters polled said Auditor Glen Gainer deserves to be re-elected, with 31 percent saying it's time to give someone new a chance at the office. He was first elected to statewide office in 1993. He succeeded his father, who served from 1977 until 1993.

Blankenship's poll asked 400 West Virginia registered voters a series of questions by cell phone or land line phone between Nov. 30 and Dec. 1 and has a 95 percent confidence rate.

Officials Aim to Keep in Touch With Drillers

December 7, 2011

By J.W. JOHNSON JR. - Staff Writer , The Intelligencer / Wheeling News-Register

As drilling for Marcellus Shale gas in Marshall County continues to increase, members of the Marshall County Commission said more

companies are being proactive in making contact with and hearing the concerns of county residents.

During a special commission session Tuesday, Commissioner Brian Schambach said events such as a recent open house held by Gastar Exploration are examples of drilling companies becoming part of the community.

More than 100 residents attended that open house.

Photo by J.W. Johnson Jr.

Marshall County Commissioners Don Mason, left, and Brian Schambach listen Tuesday during a special meeting of the commission.

"They wanted to get everything out in the open about what they plan to do with drilling and the roads," said Commissioner Jason "Jake" Padlow. "They've been a good neighbor."

Schambach said other companies are also beginning to answer questions and concerns, including Caiman Energy and TransEnergy, both of which have meetings scheduled this week with representatives from the county and the West Virginia Department of Transportation.

Padlow said most companies are on board with the county's mission of increasing the dialogue between county officials and drilling companies, though some detractors remain.

"A couple of companies are making others look bad," he said.

However, Padlow said he was pleased with the turnout by both companies and applicants at last week's Independent Oil and Gas Association of West Virginia job fair in Moundsville.

Nearly 1,200 people came to the fair seeking jobs from 40 production and service companies.

Padlow said he knows of at least one local resident who has already been offered a job stemming from the fair, something he hopes becomes a trend.

"I hope they will hire a couple hundred local people," he said, adding a number of applicants came from Ohio and Pennsylvania seeking work. "The industry is opening up regionally, but we want to see them hire locally."

Binghamton NY PressConnects.com:

Anti-drilling advocates send water to Dimock

Actor bolsters efforts to help Pa. town

10:16 PM, Dec. 6, 2011

Associated Press

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NEW YORK -- Advocates trying to keep the natural gas drilling industry out of New York took clean water Tuesday to a northeastern Pennsylvania village where about a dozen households have been scrambling after a gas driller blamed for polluting the aquifer halted daily water deliveries.

Actor Mark Ruffalo and local elected officials spoke outside New York City Hall before sending the New York water to Dimock, Pa., where residents are deeply split over the drilling. They called on New York Gov. Andrew Cuomo to visit the village to see the effect drilling can have on water quality.

Tuesday's water donations followed a contentious meeting of the Dimock Township Board of Supervisors on Monday night, where the board unanimously declined an agreement proposed by Binghamton Mayor Matthew T. Ryan to ship water for bathing, laundry and cleaning directly from the city to the affected families.

Also on Monday, the Sierra Club paid the City of Binghamton about \$400 to deliver a shipment of fresh, non-drinking water directly to six of the 11 families who had been receiving shipments from Houston-based Cabot Oil & Gas Corp. That shipment did not require a formal legal agreement between Dimock and Binghamton because it was funded by the Sierra Club.

While some Dimock residents say drilling has made their water unfit to drink, Cabot says the well water is safe and won permission from state environmental regulators last month to stop paying for water for them.

In addition to their support, those who traveled to Dimock on Tuesday brought hundreds of gallons of fresh drinking water, WNEP-TV reported.

The Environmental Protection Agency said last week that water sampling data provided by some residents failed to show contaminant levels that would trigger emergency government action, but officials there cautioned the agency isn't giving the town a clean bill of health.

Cuomo's administration is considering issuing permits for hydraulic fracturing, or fracking -- a drilling technique that involves blasting chemical-laced water into the ground -- in New York. Critics say it could poison the water supply, but the natural gas industry says the technique has been used safely for decades.

The state Department of Environmental Conservation's extended comment period on proposed regulations ends Jan. 11, after which permits could be issued. Advocates say the drilling could bring jobs and economic growth to the state.

Staff writer Steve Reilly contributed to this report.

Guest Viewpoint: DEC plan for drilling would help our region

4:04 PM, Dec. 6, 2011

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www.Consumer-Insurance.org

After years of evaluations and public input, the state Department of Environmental Conservation has put forward a comprehensive plan to safely develop natural gas resources in the Marcellus Shale region.

The Steuben County Landowners Coalition, representing more than 200,000 acres of land in the Southern Tier region, supports this plan. We are original, frontline environmentalists – property owners who care about their land – and we believe the plan offers the most effective means to protect our land and water while boosting our economy.

In the years since the financial collapse of 2008, many homeowners in the region have struggled to make ends meet. Shale development could alleviate this burden.

Just across the border in Pennsylvania, we see the benefits natural gas can bring. Workers who were struggling to make ends meet just a few years ago now hold down well-paying jobs in natural gas production, construction and associated industries. While many of us in New York are struggling to simply hold onto our homes and property due to mounting debts, our neighbors in Pennsylvania are enjoying new prosperity.

Benefits of our neighbors' development have even rippled out. Heating bills have declined significantly, in some cases as much as 70 percent lower. This is because of the abundance of cheap, safe and environmentally friendly natural gas from the Marcellus Shale. All of this explains why landowners are determined to see natural gas development come to New York. But we're determined that it's done right. We want safe natural gas development overseen by state regulators to ensure our land remains protected.

New York has spent the past four years developing a comprehensive proposal to address the concerns residents have expressed while also preempting problems that have been seen with natural gas development in other states. In this regard, the DEC's proposed plan includes special protections for drinking water, requiring extra layers of cement casings in the wells that will extend 75 feet below even the deepest drinking water tables in our state.

The proposal includes thousands of pages of safety regulations to protect land and property that go beyond those employed in other states. These regulations are based on experience, science and facts. Combining the experience of others with the environmental concerns unique to New York results in multiple fail-safes that provide landowners the security they expect and deserve.

Gov. Andrew Cuomo and the DEC have laid out a sensible plan for natural gas development. We believe it is time to move forward with the plan so that our communities can enjoy the considerable benefits enjoyed by our neighbors in

Pennsylvania.

Knowles is the president of Steuben County Landowners Coalition. He is a farmer who lives in Woodhull.

EPA slams Pa.'s new Marcellus air pollution rules

9:43 AM, Dec. 6, 2011

Written by

The Associated Press

PITTSBURGH – The U.S. Environmental Protection Agency is criticizing new rules the Pennsylvania Department of Environmental Protection is using to determine how to regulate air pollution from Marcellus shale gas wells and development sites near one another.

The Pittsburgh Post-Gazette reports Tuesday that the DEP isn't using federal guidelines to determine how close such sites need to be in order to be considered a single, major source of air pollution. Such groupings are subject to tighter air pollution controls and the EPA says the DEP's decision to treat wells and development sites more than one-quarter mile apart as separate entities means the sites will pollute the air more.

The DEP has yet to respond to the criticism, but DEP Secretary Michael Krancer has called the new rules a "practical, common-sense and legally required approach" to the problem.

Revenue from drilling income taxes is lower

10:27 AM, Dec. 6, 2011

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Morgantown - New trick allows any West Virginia resident to get extremely cheap car insurance.

www.Consumer-Insurance.org

STATE COLLEGE, Pa. (AP) - A re-evaluation of state personal income tax returns has shown Pennsylvania received

much less tax money than it expected from natural gas royalties.

Pennsylvania's Department of Revenue last week released an updated report on how much Marcellus Shale-related revenue it received in personal income taxes - a figure that shines light on the amount, in rent and royalties, that state residents are receiving from gas companies.

The report downsized its original estimate of \$102.7 million to an actual figure of \$46.2 million, a revision that Sharon Ward, director of the liberal-leaning Pennsylvania Budget and Policy Center, said ran against industry claims its tax contributions were sufficient.

"We have maintained that the industry for a long time has overstated the economic benefit of Marcellus Shale gas drilling and understated its impact," Ward said. "This revision by the Department of Revenue is an acknowledgment that their optimistic estimates have not been borne out."

Revenue Department spokeswoman Elizabeth Brassell said both its earlier estimate and its newly released report were objective and based on facts.

"We changed the number because the facts had changed," she said.

The first estimate was made in May based on payments received, and the numbers were updated after the department began to pay out income tax returns in October and discovered many taxpayers had overestimated their liabilities.

"We found more repayment was due than we had previously counted on," she said.

The Department of Revenue only recently began reporting gas industry-specific data and Brassell said there are still kinks to its tracking system that needed to be worked out.

"We're still working at refining our model, but I don't know if we'll ever get there," Brassell said.

One piece of data that might not be able to be narrowed down, Brassell said, is the true amount of personal income taxes paid by pass-through entities such as partnerships or limited liability companies.

"They can take income and pass it through to personal income, and that's much more difficult to put a pinpoint on," she said.

Ward, of the Pennsylvania Budget and Policy Center, called the estimated \$10 million the state received in personal income taxes from pass-through entities "a very small amount."

"While the industry is making a contribution, it's still a modest one," she said. "Certainly the industry is not paying for the full cost of the variety of impacts it's having on roads, emergency responders, all of that. Those costs are really being borne by local government and local taxpayers."

A statewide impact fee, under consideration in Harrisburg, would go far in addressing the issue, she said.

Patrick Creighton, a spokesman for the Marcellus Shale Coalition, a gas industry group, said the revenues will increase as the industry continues to grow in Pennsylvania.

"The Marcellus revolution only started a few short years ago," he said.

The Department of Revenue's estimate that the industry had paid \$1.5 billion in taxes to Pennsylvania since 2006 shows it

is paying its fair share, Creighton said.

"These are hundreds of millions of dollars being collected by the government in revenue that, if it were not for this industry, that money would not exist," he said. "For those who say the industry does not pay taxes, the numbers speak for themselves.

The industry is committed to long-term growth in the commonwealth," Creighton continued. "And with that will come additional revenues for the commonwealth."

Letter to editor Pittsburgh Tribune Review:

Drillers invaders, too

Wednesday, December 7, 2011

About Eric Heyl's column "[Gas well workers wary of deer hunters' cross hairs](#)" (Nov. 30 and TribLIVE.com) portraying some Pennsylvania hunters as "inebriated," "uncoordinated" and all as "armed with rifles" and invading drillers' territory: Excuse me, but the drillers also are invading territory!

The column's conversation between fictional hunters Michael and Nick is way out of line. Game Commission spokesman Jerry Feaser stands for the hunters of Pennsylvania and I thank him for his support.

If Marcellus Shale Coalition members feel their employees aren't safe while deer season is going on, maybe they should take a two-week vacation. By the way, drilling companies are in *my* comfort zone.

Scott L. Holden

Unity

----- Original Message -----

From: [Debbie Borowiec](#)

To: **Sent:** Wednesday, December 07, 2011 1:55 AM

Subject: Learn about toxic chemicals used in hydraulic fracturing

<http://toxmap.nlm.nih.gov/toxmap/news/2011/11/learn-about-toxic-chemicals-used-in-hydraulic-fracturing.html>

Learn about toxic chemicals used in hydraulic fracturing

By TOXMAP Admin on November 30, 2011 7:28 PM

November 30, 2011

Hydraulic fracturing (also called hydrofracking or fracking) is a process in which millions of gallons of water, sand and chemicals are pumped underground to break apart rock in order to release oil and natural gas.

The US EPA Toxics Release Inventory (TRI) program requires facilities in certain industries that manufacture, process, or use significant amounts of toxic chemicals, to report annually on their releases of these chemicals. Hydraulic fracturing is currently **not** a TRI-covered industry and so is not represented in TOXMAP.

EPA scientists are conducting a study of hydraulic fracturing to better understand any potential impacts on drinking water and groundwater. Congress has released a report on hydraulic fracturing (PDF, 156 KB) that lists 29 toxic chemicals used in fracturing (see Table 3 of this report). Click on the links in the table below for additional information on these chemicals:

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Diethanolamine	Dimethyl formamide	Ethylbenzene
Ethylene glycol	Ethylene oxide	Formaldehyde
Hydrochloric acid	Hydrofluoric acid	Lead
Methanol	Naphthalene	Nitrilotriacetic acid
p-Xylene	Phenol	Phthalic anhydride
Propylene oxide	Sulfuric acid	Thiourea
Toluene	Xylene	

----- Original Message -----

From: [Ex. 6 - Personal Privacy](#)

To: [Donald C. Strimbeck](#)

Sent: Tuesday, December 06, 2011 10:47 PM

Subject: New Study Finds Bottom-of-Barrel Flowback Fluids Much More Contaminated

This is another good article circulating among our Doddridge friends:

http://www.pceer.org/news/news_id.php?row_id=1534

The gist is that fracking fluids stored in a tank (to avoid problems associated with storing in a pit) get significantly higher levels of chloride as the samples taken come from greater depth. The result is that:

- Typical test kit sampling greatly underestimates chemical concentrations;
- Shallow samples could allow operators to circumvent contamination limits on land disposal of these waste fluids; and
- Surprisingly high chloride concentrations remained even after “the primary source of Cl ... the hydrochloric acid in fracking fluids ... had been recovered separately...”

Public Employees for Environmental Responsibility News Release (www.peer.org)

For Immediate Release: November 17, 2011

Contact: Kirsten Stade (202) 265-7337

FRACKING FLUIDS – THE DEEPER, THE DIRTIER — New Study Finds Bottom-of-Barrel Flowback Fluids Much More Contaminated

Washington, DC — A new federal study finds wastewater from natural gas hydrofracturing has higher levels of contaminants the deeper in the storage tank the samples are taken. These findings may be a key to preventing environmental damage from disposal of huge volumes of post-fracking water produced in the boom to exploit shale gas, according to Public Employees for Environmental Responsibility (PEER).

Released November 16, 2011, the study by the U.S. Forest Service researchers is entitled “Chloride Concentration Gradients in Tank-Stored Hydraulic Fracturing Fluids Following Flowback.” It analyzes 11,000 gallons of fracking fluids that flowed back to the surface and were stored in two 18-foot tall tanks after drilling in the Fernow Experimental Forest within West Virginia’s Monongahela National Forest.

The key finding is that samples taken near the surface below the top scum are far less contaminated than samples taken deeper in the tank. Increasingly higher levels of the tracked chemical, chloride (Cl), are found the deeper samples are drawn. These differences are also visible to the naked eye:

“Differences in the physical appearance of the shallow (4- and 8-foot) and deeper (12- and 16-foot) samples also suggested the overall chemistry of these samples was quite different.”

This research also highlights limitations of current approaches to lessen environmental damage from disposal of these fracking flowback fluids, including –

- Typical test kit sampling greatly underestimates chemical concentrations;
- Shallow samples could allow operators to circumvent contamination limits on land disposal of these waste fluids; and
- Surprisingly high chloride concentrations remained even after “the primary source of Cl ... the hydrochloric acid in fracking fluids ... had been recovered separately...”

“Not all fracking fluids are created equal, meaning that a one-size-fits-all approach will not protect human health or the environment,” stated PEER Executive Director Jeff Ruch, whose organization has been urging the Forest Service to apply basic safeguards on shale gas extraction. “There are great uncertainties about fracking fluids injected into shale formations but the fluids returning to the surface are little understood, as well.”

This summer, another Forest Service study found land disposal of this fracking wastewater quickly wiped out all ground plants, killed more than half of the trees and caused radical changes in soil chemistry.

“Fracking flowback is a forgotten waste stream that may come back to haunt us,” Ruch concluded.

----- Original Message -----

From: **Ex. 6 - Personal Privacy**

To: Sent: Tuesday, December 06, 2011 8:31 AM

Subject: Fwd: Fw: Another Brock Ridge truck crossing Rt. 7 out of control

----- Forwarded message -----

From: **Ex. 6 - Personal Privacy**

Date: Mon, Dec 5, 2011 at 8:23 PM

Subject: Fwd: Fw: Another Brock Ridge truck crossing Rt. 7 out of control

To:

Ex. 6 - Personal Privacy

I just talked to bonnie Hall..she said the mountain slipped with a pad on it and 2 homes had to be evacuated on pleasants ridge and another day in the life of those who are living with the problems..thank god the families were not buried alive. Chesapeake now plans to move the homes and ut rock on the mountain..so far the slips keep slipping because the ground here is not like out west . if you'd like to talk to [Ex. 6 - Personal Privacy] please call her at [Ex. 6 - Personal Privacy] .they will be talking to the county commisioners and reporters etc [Ex. 6 - Personal Privacy]
[Ex. 6 - Personal Privacy]

----- Message Forwarded on Mon, 05 Dec 2011 20:19:42 -0500

From: **Ex. 6 - Personal Privacy**
To: **Ex. 6 - Personal Privacy**
Subject: Fw: Another Brock Ridge truck crossing Rt. 7 out of control
Date: Mon, 5 Dec 2011 18:28:51 -0500

From: **Ex. 6 - Personal Privacy**
Sent: Monday, December 05, 2011 11:38 AM
To: Stacey Brodak ; 'Sheriff Hoskins' ; 'Scott Lemley' ;
'Larry Edgell' ; Jeff.kessler@wvsenate.gov ;
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; Amy Dobkin ; dot.secretary@wv.gov ;
dot.commissioner@wv.gov Cc: Steve Conlon ; sara whiteman ;
reporter@wetzelschronicle.com ; Raymond Renaud ; James A.

Holler Jr. ; 'Hughes Electric Inc.' ; Ed Wade ; Bonnie Hall
Subject: Another Brock Ridge truck crossing Rt. 7 out of control

On Friday evening, Dec. 2 a little after 5:00 p.m. another truck coming down Brock Ridge Rd. lost control and crossed Rt. 7, ending up jack knifed against the guard rail. The initial report the Sheriff's Dept. got was that the truck was just disabled. But upon further investigation by the Wetzel County Action group it became clear that the truck had lost control and crossed Rt. 7 which is a busy highway. About a month ago another truck crossed Rt. 7 out of control and went through the guard rail. This makes at least 8 that we have documented in the past year or so, there were others but we didn't get any documentation on them. My son came through on Rt. 7 just after the one in November and the wheels were still spinning, he also came through a few minutes after the one this past Friday. He travels this road every day as do many other members of my family, and my neighbors and friends. A school bus travels Rt. 7 twice a day passing the Brock Ridge / Rt. 7 intersection.

For those of you who are not familiar with this intersection , Brock Ridge Road is an 18% grade hill that is one mile long and intersects with Rt. 7 which runs east and west. Last year when a dump truck lost his brakes on this hill, another dump truck traveling on Rt. 7 was T-Boned at this intersection and created a massive wreck, (thank god it was't a passenger vehicle as they probably would not have survived). There are signs posted at the top of this hill THAT WARN THESE DRIVERS TO GEAR DOWN, STEEP HILL AHEAD. They obviously are not reading or paying attention to these signs. This has been and still is a very dangerous

situation, something needs to be done BEFORE someone is killed, (at least I hope it doesn't take someone getting killed to get something done).

I don't ever remember a truck of any size losing their brakes and coming off this hill out of control before the oil and gas industry began using this as their access road.. I don't know if these drivers for the oil and gas industry (Chesapeake Energy mainly) are in a hurry to get their next load, are not paying attention, or just think they can make it without gearing down.

Maybe flashing lights installed at the top of the hill, maybe each and everyone of these trucks needs an escort telling them when to brake and gear down, maybe a driver education course, I'm not sure what the solution is, but we need to come up with one to help minimize the dangerous situation that has been created at this intersection for the people who travel it each day, including the school bus.

When an accident happens here (and it will) again, and a local person is killed, or the schoolbus is hit, the responsibility will lie with you all, as this is not the first time we have brought this to your attention.

Sincerely

Ex. 6 - Personal Privacy

----- Original Message -----

From: Super Man

To: Sent: Tuesday, December 06, 2011 1:54 PM

Subject: Fw: Burning Question: What Would Life Be Like Without the Halliburton Loophole? | StateImpact Pennsylvania

<http://stateimpact.npr.org/pennsylvania/2011/12/05/burning-question-what-would-life-be-like-without-the-halliburton-loophole/>

Oil, gas expo draws 800

12/7/2011 3:34 AM

By Michael Bradwell

Business editor

mbradwell@observer-reporter.com

HOUSTON - More than 800 high school students attended a first-ever Oil & Gas Youth Career Expo Tuesday at Western Area Career & Technology Center.

The event, sponsored by the Tri-County Oil & Gas Expo committee, Southwest Training Services, Southwest Corner Workforce Investment Board and WACTC, also drew about 40 companies, most of which were related to drilling, production and supply in the area's Marcellus Shale strata.

The organizers, who said the event exceeded their expectations, said they were surveying students, teachers and companies to help plan similar events in the future.

Andrew Corfont of the expo committee said more than 800 students signed up to attend the event, adding that nearly all high schools from Washington and Greene counties sent students, as well as some from Beaver and Mercer counties.

WACTC Director Dr. Joe Iannetti said the expo easily surpassed career fairs the school has sponsored for jobs in Pennsylvania's highway and bridge construction industry.

"This is twice as big," Iannetti said.

"It's fantastic," said Lisa Neil, president of Southwest Training Services, as she surveyed a packed exhibition room in the center of the

school, noting students weren't just picking up materials from the various companies, but also attending various workshops set up throughout the building.

In the auditorium in the LPN building, Mike Forgione, representing Friends of Marcellus Shale, gave a series of lectures to about 60 students, explaining the jobs and careers available in the oil and gas industry.

Joe Phillips, a senior at Jefferson-Morgan High School, was one of those who was checking out the displays and exhibitors Tuesday morning.

"I want to get into the oil field," Phillips said, adding that he's considering majoring in petroleum engineering at either West Virginia University or Penn State.

Others, like Matthew Ross, a home-schooled student from Trinity Area School District, were attending to consider working in the oil and gas industry as one of several career possibilities.

"Some of the kids aren't really sure what they want to do," said Becky Applegath, who was representing Patterson-UTI Drilling Co. at the event. "Not everyone is going to go to college or join the military; the oil and gas industry is another option for people to get started in."

Ellen Hill, a career coach from Freedom School District in Beaver County, said she was trying to impress upon students that there are careers available in the gas industry beyond those available on a drilling rig.

"There's so many other jobs, like payroll, human resources and management," she said.

On Tuesday, information giant IHS Global Insight published a report projecting that production of natural gas from shale - which already accounts for more than 30 percent of all natural gas produced in the U.S. - will support 870,000 jobs and add \$118 billion to economic growth in the next four years.

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U.S. EPA critical of Pa.'s Marcellus air pollution regs

12/7/2011 3:33 AM

Associated Press

PITTSBURGH - The U.S. Environmental Protection Agency is criticizing Pennsylvania's interim rules on air pollution from Marcellus gas wells, saying the regulations apparently would allow for more pollution than federal guidelines do.

The federal agency offers guidance on how to identify a single, major source of pollution, which could include several wells depending on their location to each other. Each major pollution site would then be subject to tighter air pollution controls.

But the EPA says the Pennsylvania Department of Environmental Protection isn't using federal guidelines to determine how close the sites need to be to be considered an aggregated, or single major, source of pollution, the Pittsburgh Post-Gazette reported Tuesday.

The EPA contends the state decision to treat natural gas wells and development sites more than one-quarter mile apart as separate sites will allow for more air pollution, the newspaper reported.

Diana Esher, the EPA's regional air protection division director, noted the agency's concern in a Nov. 21 public comment letter on the state's interim rules.

The state Department of Environmental Protection began enforcing its Oct. 12 draft policy on an interim basis while the agency took public comment on it through Nov. 21. The policy has not yet been finalized.

The newspaper reported that the state agency did not respond to its requests for comment. The agency also did not immediately respond to emails from the Associated Press Tuesday.

Department Secretary Michael Krancer has previously said the interim rules are a "practical, common sense and legally required approach to air aggregation issues."

The Marcellus Shale Coalition, a drilling industry group, says the new rules give well developers more predictable criteria to help plan drilling sites, while still allowing regulators to consider other factors to limit pollution.

"It's a good compromise," Kathryn Klaber, the industry group's president, said.

Environmental groups want the EPA to force the state agency to tighten its new rules.

"What we need in Pennsylvania, and deserve in Pennsylvania, are world-class standards for controlling drilling pollution," said Jan Jarrett, president and chief executive officer of Citizens for Pennsylvania's Future.

She said the state agency has "thumbed its nose at the EPA" by not using the federal guidelines.

"The EPA's standards are better," Jarrett said. "And you would think, given the state's long history of bad air and the cost of bringing it into compliance, that the DEP would be eager on economic grounds to restrict emissions."

Thomas Au, conservation chair of the Sierra Club Pennsylvania Chapter, said if enough gas wells and development sites escape the more stringent air pollution standards, "the regional air quality would degrade. Eventually, whole counties would not attain the national ambient air quality standards."

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WALL STREET JOURNAL:

Oil's Growing Thirst for Water

By RUSSELL GOLD and ANA CAMPOY

CARRIZO SPRINGS, Texas—Water has always been a concern for 65-year-old Joe Parker, who manages a 19,000-acre cattle ranch here in South Texas. "Water is scarce in our area," he says, and a scorching yearlong drought has made it even scarcer.

Mixing Oil and Water

See projected fracking water usage in 122 major Texas counties in 2010, 2020 and 2030, and the percentage of water wells in Texas that are oil-related.

A landowner offers water for sale outside Carrizo Springs, Texas.

What has Mr. Parker especially concerned are the drilling rigs that now dot the flat, brushy landscape. Each oil well in the area, using the technique known as hydraulic fracturing, requires about six million gallons of water to break open rocks far below the surface and release oil and natural gas. Mr. Parker says he worries about whether the underground water can support both ranching and energy exploration.

Darrell Brownlow, another cattle rancher, says that if the economically depressed region has to choose between the two, the choice

should be simple.

Mr. Brownlow, who has a Ph.D. in geochemistry, says it takes 407 million gallons to irrigate 640 acres and grow about \$200,000 worth of corn on the arid land. The same amount of water, he says, could be used to frack enough wells to generate \$2.5 billion worth of oil. "No water, no frack, no wealth," says Mr. Brownlow, who has leased his cattle ranch for oil exploration.

Hydraulic fracturing, or fracking, has revived prospects for oil-and-gas production in the U.S. and provided a welcome jolt to many local economies. Less than three years after its discovery, the Eagle Ford oil field here already accounts for 6% of South Texas's economic output and supports 12,000 full-time jobs, according to a study by the University of Texas at San Antonio earlier this year, which was funded by an industry-backed group.

But fracking also is forcing communities to grapple with how to balance the economic benefits with potential costs. To date, criticism of fracking has focused mainly on concerns that the chemicals energy companies are mixing with the water could contaminate underground aquifers. Oil industry officials regard that issue as manageable. The biggest challenge to future development, they say, is simply getting access to sufficient water.

The issue isn't just rearing its head in parched regions like South Texas. North Dakota, another big source of oil from fracked wells, is concerned about the industry depleting aquifers and has threatened to sue the federal government to free up water held by an Army Corps of Engineers dam. Oklahoma, too, is struggling to cope with the industry's thirst.

Last year, Louisiana passed a law to regulate what it called the industry's "unprecedented use of enormous amounts of water" that, if unchecked, has the "potential for chaos and conflicts." In northern British Columbia, which has plenty of water, officials have required companies extracting natural gas to install expensive equipment to recycle water used for fracking. It wasn't a pollution-control effort, but a response to local communities that didn't want their water supplies tapped.

In Pennsylvania, the industry and state regulators have cracked down on the amount of salty water from fracking jobs being sent to water-treatment plants that weren't designed for it. A large amount of this water is now being recycled and reused, cutting down on the amount of fresh water needed to continue developing new wells.

Fracking involves drilling deep into large swaths of dense rock where oil and gas are trapped. To crack the rocks and allow the oil or gas to flow out, energy companies inject millions of gallons of water, mixed with sand and chemicals, at high pressure.

After sending natural-gas production soaring, hydraulic fracturing now is playing a critical role in the dramatic rise of oil production in Texas and North Dakota. Many industry officials believe it will allow Ohio to become a major oil producer, and other states could follow. Oil imports are falling, prompting talk of slashing U.S. dependence on foreign energy sources.

Here in South Texas, tensions are rising as companies scramble to lock up water to drill natural-gas and oil wells. All across the state, companies have been on a buying spree, snapping up rights to scarce river water—easily outbidding traditional users such as farmers and cities. Led by Exxon Mobil Corp., they also are drilling water wells, three times as many as they did five years ago. They are even tapping into municipal water systems, though parched cities have begun cutting them off.

There is no disputing that the boom has been terrific for the local economy, and few residents are calling for an end to fracking. Demand for workers is so high that Carrizo Springs resembles a hastily built labor camp, with thousands of temporary workers filling up a dozen new recreational-vehicle parks. The city's population has nearly doubled to about 11,000 in the past two years, say local officials. Sales-tax revenue in Dimmit County in 2011 is expected to exceed the previous five years combined. The University of Texas at San Antonio study predicted that, by 2020, the oil field will support 68,000 jobs, and its economic output will increase nearly ninefold.

Compared with demands from cities, farmers and even power plants, the amount of water needed to develop oil and gas wells in Texas is small. In September, the Texas Water Development Board released a draft of the 2012 Texas water plan—a report prepared once every five years. It said 56% of water in Texas goes to commercial crops; 26.9% to cities and public-water systems; 9.6% to manufacturing, including refineries; 4.1% to power generation; 1.8% for livestock; and 1.6% to mining, which includes oil-and-gas drilling.

But the report noted that the rise of fracking has been so sudden and steep that it wasn't really integrated into the report. In addition, the oil-industry's water use is concentrated in select parts of the state, magnifying the impact in those places.

Fewer than 2,000 oil and gas wells have been drilled in the past couple of years in South Texas. The industry expects that number to climb to as many as 25,000 over the next couple of decades.

Eagle Ford oil wells are the most profitable of the thousands being drilled into shale rocks nationwide each year, according to an analysis by Credit Suisse Group.

Because of the geology of the Eagle Ford, each oil or gas well there uses the equivalent of 10 Olympic swimming pools' worth of water—nearly twice as much as needed for wells in the Barnett Shale field in North Texas, according to industry and academic data. Most of the water injected into shale wells nationwide is absorbed by the rocks and isn't available for recycling. At the Eagle Ford, practically none of it is recycled.

Most Eagle Ford wells draw water from the Carrizo aquifer. That aquifer "is already stressed, and now you are adding an additional demand," says Ronald Green, a hydrologist at Southwest Research Institute, a nonprofit research-and-development organization in San Antonio that does scientific analysis for the government and industry.

Studies by hydrologists and geologists suggest more than twice as much water in recent years has been drawn from the aquifer as has been recharged by rain. And that was before the Eagle Ford energy boom started.

Last year, oil companies drilled 2,232 new water wells throughout Texas, about three times as many as five years earlier, according to a Wall Street Journal analysis of Texas Water Development Board records. More oil wells are expected, and as the industry refines its techniques and drills longer wells, the amount of water used for each well is climbing.

The oil industry has long believed that its thirst for water could cause problems. The American Petroleum Institute, a Washington-based industry trade association, warned against using fresh water for fracking in its 2010 best-practices advice. In an email, the institute said the industry should consider nonpotable water "whenever practicable," but decisions must be made on a "case-by-case basis."

Some companies are taking steps to use less potable water. Anadarko Petroleum Corp. says it is exploring whether it could extract

water from a deep, salty aquifer unfit for people or crops. Devon Energy Corp. has begun recycling a small percentage of the water it uses for fracking.

"We need to be ahead of the curve on some options should there come a time that water is not so readily available as it is today, through drought or regulatory issues," says Jay Ewing, a Devon manager in North Texas.

In Texas, the industry's thirst puts it in direct competition for water with traditional users, which already are drawing more water from aquifers because of the drought. Ranchers have had to lower the pumps in their wells to find enough water.

Kenneth Braden, a 61-year-old rancher who raises cotton southeast of Midland, Texas, says his water wells now pump half as much as last year. He blames the drought and what he says is the "overwhelming" amount of water used for fracking.

Mr. Braden doesn't favor shutting down the wells, which he realizes provide lots of jobs. He says he wants the companies to figure out ways to use fewer gallons. He has tried to raise the issue with them, he says, but hasn't gotten a response. "They're just so much bigger and more powerful than we are," he says. "We're just kind of the little ant that gets squashed."

Under Texas law, an oil company that has the mineral lease on a property has the right to tap aquifers without the consent of landowners.

Dan Waldrop owns 1,200 acres in LaSalle County, about halfway between San Antonio and Laredo, but he doesn't own the mineral rights. The energy company that does has drawn nearly 30 million gallons of water so far from a well it drilled on his property.

He says he is considering trying to make the company pay for it. "In the deed, it says they have the use of the water, and it doesn't say they have free use," he says.

In addition to tapping underground aquifers, oil companies are interested in water from Texas rivers. They have acquired—or are currently seeking to acquire—from local irrigation authorities the rights to nearly 40,000 acre-feet of water a year. That is enough to supply nearly a quarter-million people for a year.

One source has been the Rio Grande. Cities along the river, which are among the fastest growing in the state, draw from it to supply water to residents.

"This is a major concern for us," says Juan Hinojosa, a Democratic state senator from McAllen who represents the area. "The oil companies have a lot more money than we do to buy water rights."

The intense drought over the summer exacerbated the water concerns of cities. More than 964 public water systems, covering 14.7 million Texans, have imposed voluntary or mandatory restrictions, according to the state.

This summer, the city of Grand Prairie, near Fort Worth, stopped selling water to oil companies as part of its drought-contingency measures, which also included lawn-watering restrictions.

Oil companies have long been exempt from most Texas state water rules and permitting requirements, but the state has begun to take a fresh look at the industry's ability to drill water wells wherever they have acquired rights to extract oil and gas. Texas oil regulators have convened a task force to look at a range of issues related to the Eagle Ford boom.

"The No. 1 issue is water," says David Porter, a Republican member of the Texas Railroad Commission, which regulates the oil industry and is seen as generally pro-development. "Everyone is concerned about water." The task force expects to issue recommendations on

water next year.

Even people such as Mr. Parker, the rancher worried about water depletion, find it tough to resist the cash oil companies are offering. In South Texas, the water needed to frack a single well can fetch more than \$50,000. Mr. Parker decided to sell his water. "If they didn't get it from me," he says, "they would get it from my neighbor."

Mark McPherson, a Dallas-based water-rights lawyer who has represented both ranchers and oil companies, expects conflicts over water to increase as hydraulic fracturing expands. Texas resource-development laws are designed to encourage the oil industry to produce as much as possible, he says, but in recent years, the state's water use rules have been geared toward conservation.

"Those two fundamental philosophies are diametrically opposed to each other," he says. "They are in conflict from the get-go."

Write to Russell Gold at russell.gold@wsj.com and Ana Campoy at ana.campoy@dowjones.com

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